

CLAIMS:

1. A method of compensating for a linear time scale change in a received signal, the signal being modified by a sequence of symbols in the time domain, the method comprising the steps of:

- (a) extracting an initial estimate of the sequence of symbols from said received
5 signal;
(b) forming an estimate of a correctly time scaled sequence of the symbols by interpolating the values of said initial estimate.

2. A method as claimed in claim 1, wherein step (b) is repeated so as to provide a
10 range of estimates corresponding to different time scalings.

3. A method as claimed in claim 1, wherein said interpolation is at least one of zeroth order interpolation, linear interpolation, quadratic interpolation and cubic
15 interpolation.

4. A method as claimed in claim 1, the method further comprising the step of processing each estimate as though it were the correctly time scaled sequence of the symbols, so as to determine which estimate is the best estimate.

5. A method as claimed in claim 1, the method further comprising the steps of correlating each of said estimates with a reference corresponding to said sequence of
20 symbols; and taking the estimate with the maximum correlation peak as the best estimate.

6. A method as claimed in claim 1, wherein said initial estimate of the sequence of symbols is stored in a buffer.

7. A method as claimed in claim 6, wherein said buffer is of total length M, the total number of scale searches conducted is $N_{\eta} = \frac{M}{2} (\eta_{\max} - \eta_{\min})$

where η_{\min} , η_{\max} correspond respectively to the minimum and maximum likely time scale modifications of the signal.

8. A method as claimed in claim 1, wherein said initial estimates of the sequence
5 of symbols comprises a sequence of N_b estimates for each symbol, each of the N_b estimates corresponding to a different time offset of a symbol.

9. A method as claimed in claim 1, wherein the scale search in the next detection
window is adapted based on the information acquired during the current detection window.

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10. A method as claimed in claim 1, wherein the scale space is searched using an
optimal searching algorithm.

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11. A method as claimed in claim 10, wherein the searching algorithm is the grid
refinement algorithm.

12. A computer program arranged to perform the method as claimed in claim 1.

13. A record carrier comprising the computer program as claimed in claim 12.

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14. A method of making available for downloading a computer program as
claimed in claim 12.

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15. An apparatus arranged to compensate for a linear time scale change in a
received signal, the signal being modified by a sequence of symbols in the time domain, the
apparatus comprising:

- an extractor arranged to extract an initial estimate of the sequence of symbols
from said received signal; and

- an interpolator arranged to form an estimate of a correctly time scaled
30 sequence of the symbols by interpolating the values of said initial estimate.

16. An apparatus as claimed in claim 15, the apparatus further comprising a buffer
arranged to store one or more of said estimates.

17. A decoder comprising the apparatus as claimed in claim 15.